

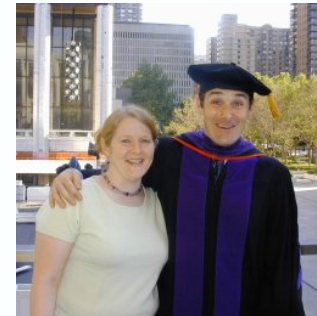
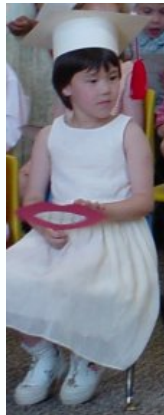
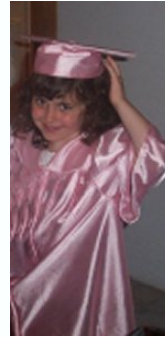
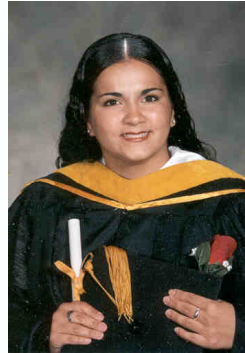
# Why are we here today?

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- Culmination of 4 weeks of safety self evaluations at C-A.
- We have met individually with 12 groups (Users next).
- Today, we are here to summarize what has been learned and to start the path forward.
- Tomorrow, we will work with you on the details.

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- No one wants to get hurt.
    - Both for one's own sake, one's family, friends and coworkers.

# This Is Why I Won't Get Hurt Today



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- So we should all come away today with the mantra:

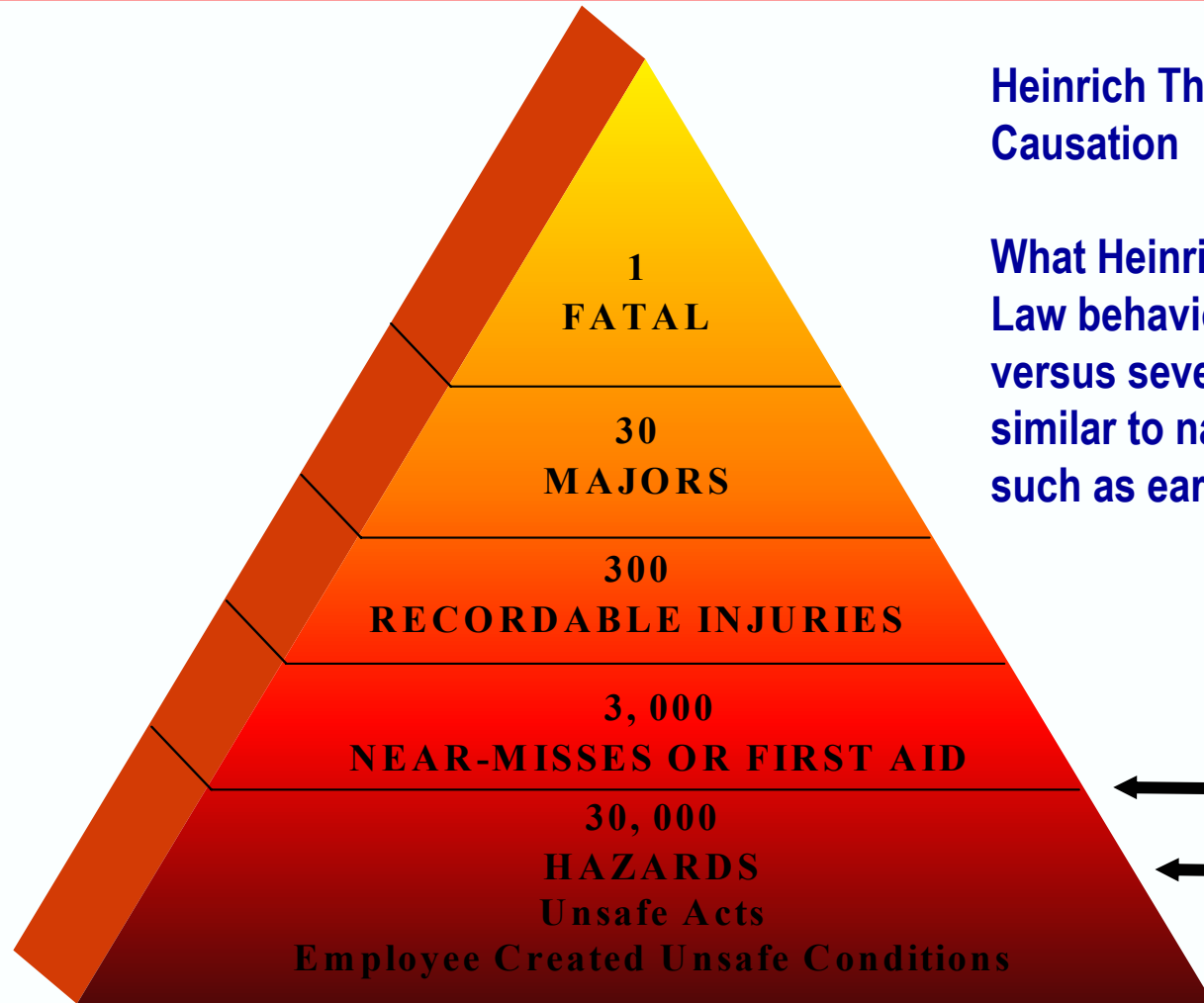
**THINK SAFETY. ACT WISELY.**

# How Does One Measure Safety Performance?

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- Hindsight analysis.
  - The common statistical approaches are lagging indicators.
  - They tell you basically that you have a problem after an accident has occurred.
  
- The Holy Grail is a reliable predictive analysis to stop serious accidents.
  - The “little bumps”, the personal risks taken etc., that are not reported are the precursors of accidents waiting to happen.

# Do We Have Control Over Injuries?



## Heinrich Theory of Accident Causation

What Heinrich found was a Power Law behavior of # of accidents versus severity of the accident, similar to natural phenomena, such as earthquakes.

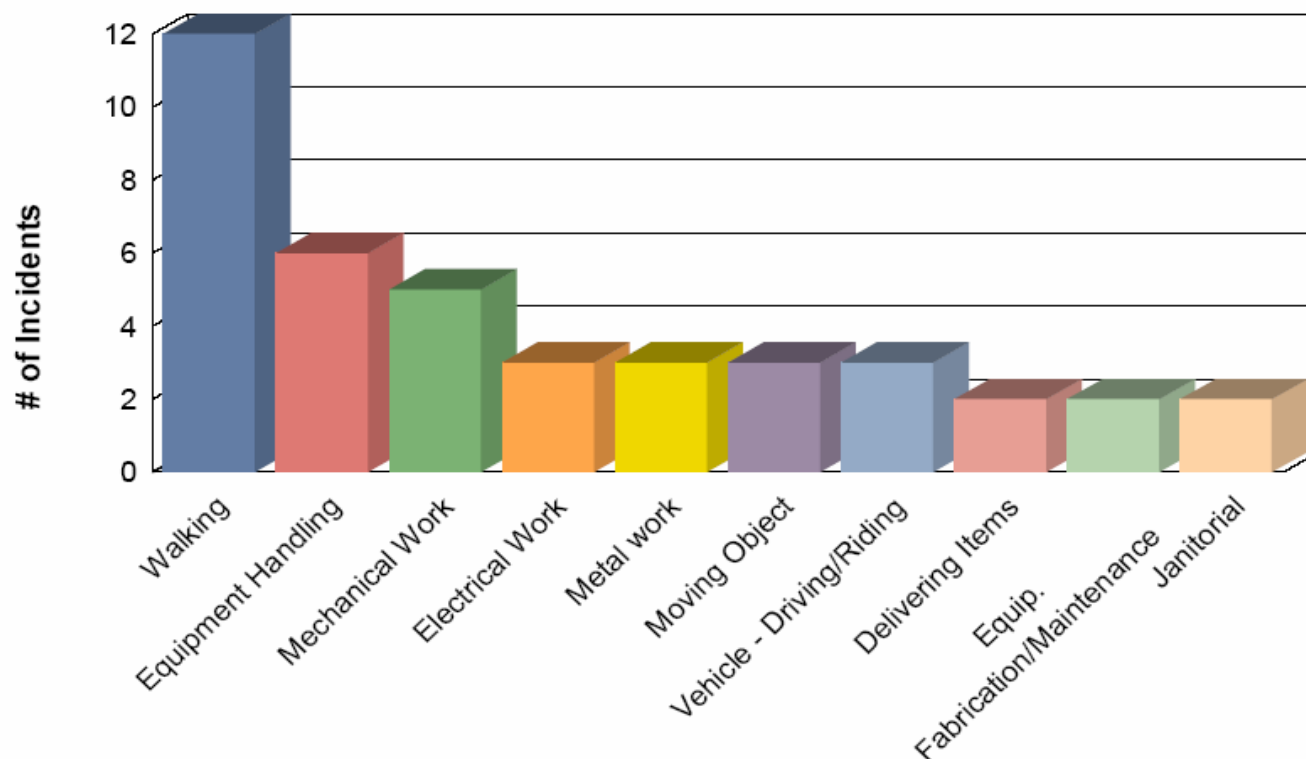
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# HINDSIGHT STATISTICS

- THIS TELLS US WHERE WE HAVE HAD PROBLEMS.
- A TOOL IN CORRECTING SOME CLASS OF EVENTS.

# FY04 Lab-Wide Results

## Top Ten Activities Assoc. w/ Incidents

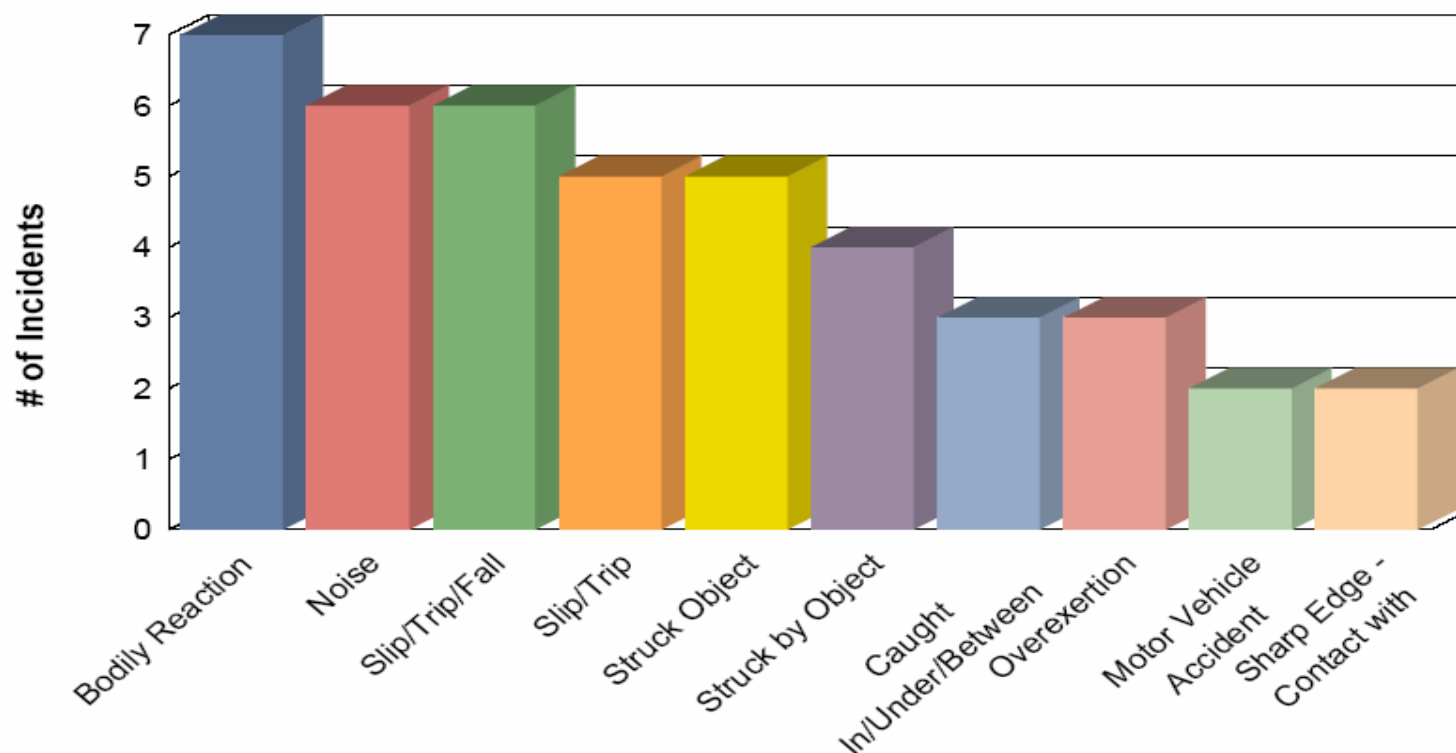




# FY04 Lab-Wide Results

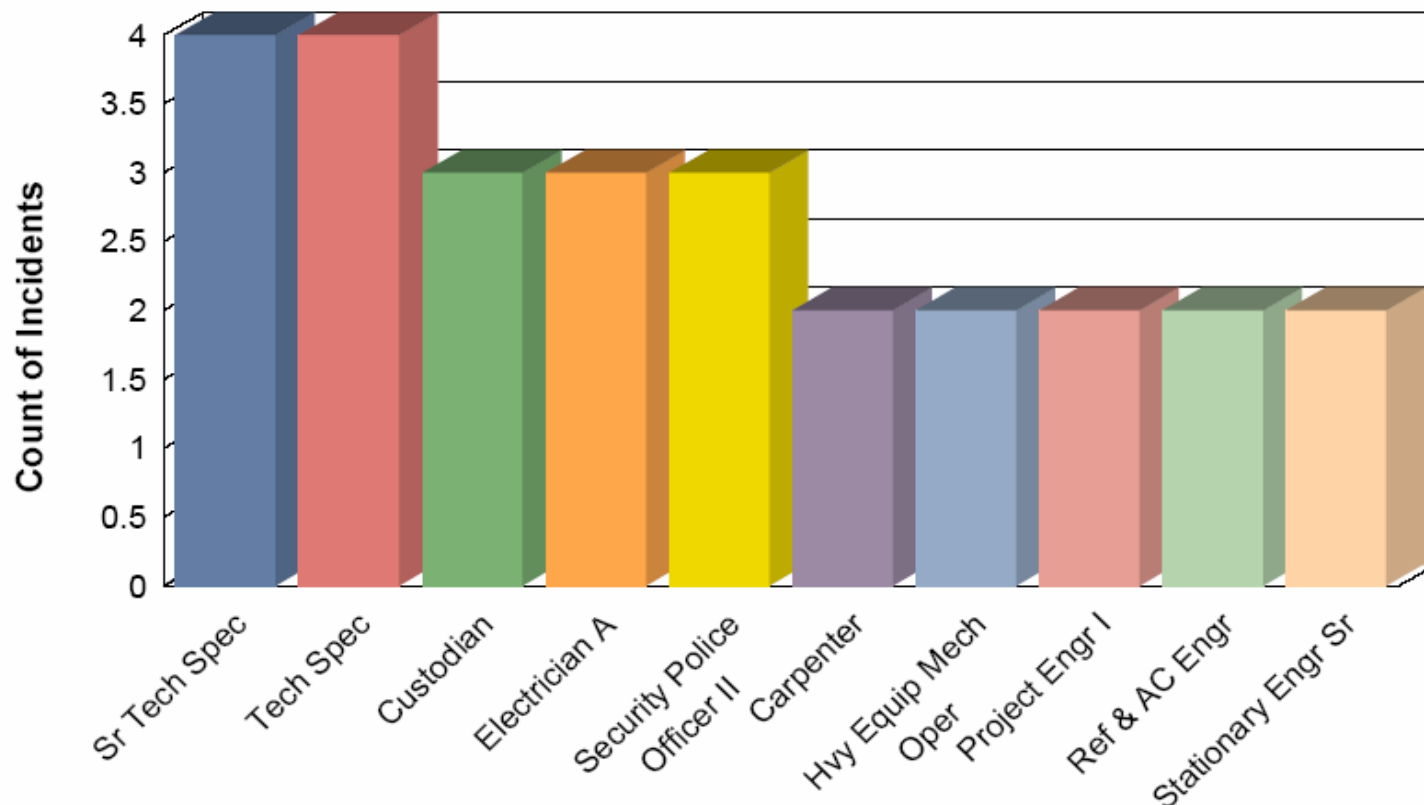
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## Top 10 Incident Causes



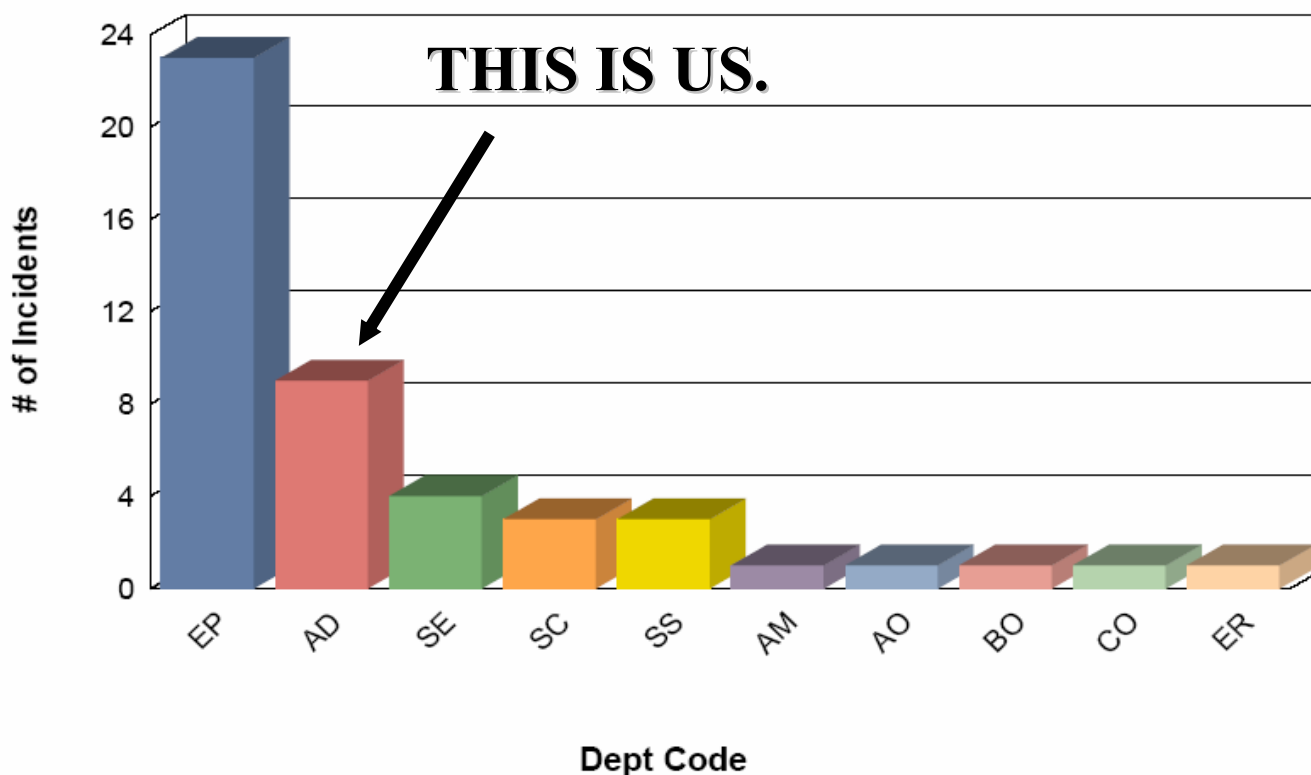
# FY04 Lab-Wide Results

## Top Ten Job Titles w/Incidents



# FY04 Lab-Wide Results

## Top Ten Dept./Div. with Incidents



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# PREDICTIVE STATISTICS

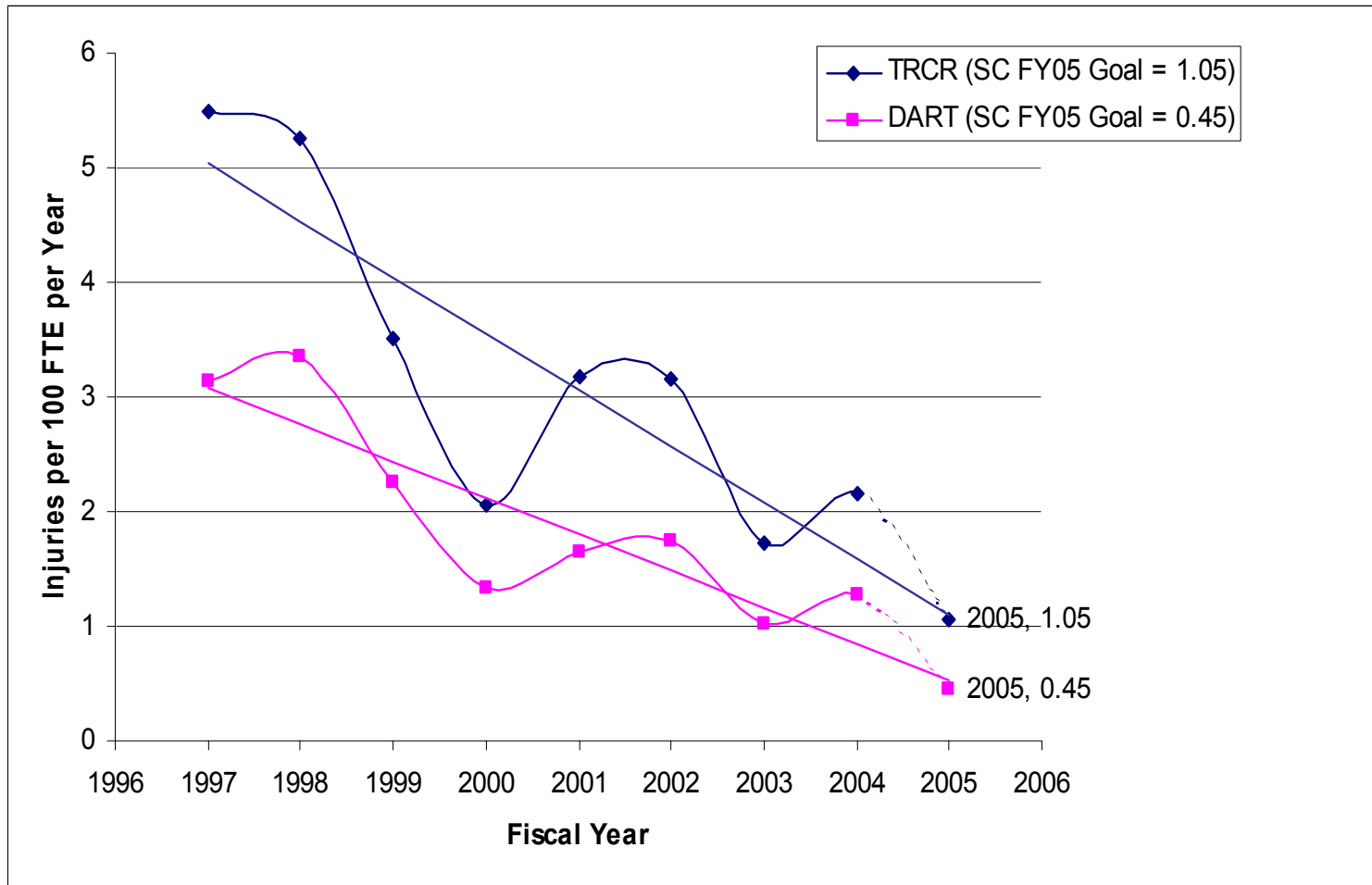
THERE IS NO PLOT. IT MAINLY DEPENDS UPON ONE'S OWN BEHAVIOR.  
IT'S OUR ATTITUDE AND ACTIONS AT THE BOTTOM OF  
HEINRICH'S PYRAMID.  
THIS IS THE PREDICTOR OF EVENTS ABOVE THRESHOLD.

# Some Definitions

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- An OSHA recordable injury is an occupational injury or illness that requires medical treatment more than simple first aid and must be reported on the OSHA form 300.
- "DART" stands for "Days Away, Restricted or Transferred" A DART case is a subset of OSHA recordable cases where the injury/illness is severe enough that the individual loses time away from his/her job by being away from work, on restricted duty, or transferred to another job function because of the injury

# BNL Occupational Injury Rates and DOE FY05 Goals



# FY05 Safety Goals for BNL

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- The OSHA recordable goal of 1.05 equates to 26 injuries at BNL
- DART rate goal of 0.45 equates to 11 DART cases at BNL
- The C-A goal is 0.0

# How Are We Doing?

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- C-AD Injuries in FY '04
  - 10 Recordable; UP FROM 5 IN FY2003
  - 6 DART; UP FROM 0 DART IN FY2003
- Traffic Citations in the Last Year
  - 9 Parking
  - 11 Moving
  - 14 Speeding
- NOT PARTICULARLY WELL IN FY2004



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# WHAT DID WE TALK ABOUT AND LEARN OVER THE PAST 4 WEEKS?

# On Behavior

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*“We are what we repeatedly do. Excellence, then, is not an act, but a habit.”*

**Aristotle**

# Safe Behaviors

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- Don't walk past a mistake
- Be relentless in correcting unsafe conditions
- Don't accept certain injuries as unfixable
- Praise and reward safe behavior quickly
- Thank someone for bringing up issues
- Follow the procedure
- Ask questions
- Lead by example!

# On Risk

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*“History doesn’t repeat itself – at best it  
sometimes rhymes”*

**Mark Twain**

# Reducing Risk and Unsafe Behaviors

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- Wear personal protective clothing
- Take the time to do work planning
- Don't take shortcuts to meet a deadline, take a stance
- Employ all the hazard controls
- Don't use damaged equipment
- Don't block exits
- Don't block disconnects

# On Leadership

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*“If you can't be a good example, then you'll just have to be a horrible warning.”*

**Catherine Aird**

# How Do We Improve Our Safety Performance As Practiced By Organizations With The Best Safety Records?

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- **Safety Meetings:** All Groups need to have regular, effective safety meetings, involving all employees.
  - Employ ALD's policy and have effective safety meetings
  - 'Effective' implies all people are present and paying attention
  - We will distribute ideas for safety meetings frequently

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■ **Safety Rules:** Safety rules must be comprehensive, up-to-date, crafted with broad participation and consistently applied.

- SBMS under new leadership; 2-year upgrade plan
- Issues with BNL training will be passed to ALD
- Work delays for safety reasons are acceptable and required
- Policy on wooden ladders will be reissued
- LOTO wording in access procedures will be improved
- ACS Group will implement a bypass tracking system
- Access training will be updated with TVDG specific hazards
- Procedures in the OPM will be made more searchable and personnel will be made more familiar with the contents
- C-AD will implement NFPA 70 E rules for protective clothing for arc flash
- It is OK to stop and check the rules even if it delays work



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- **Enforcement of Safety Rules:** Disciplinary action for safety infractions must be practiced as an essential part of good safety.
    - Information on disciplinary policy and first-aid policy will be distributed
    - It is expected that workers learn all the rules that govern their work
    - Cost must not drive non-compliance

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■ **Injury and Incident Investigation:** Every injury and incident must be considered an opportunity to learn and improve. There should be thorough processes of investigation.

- The injured worker will be more involved in investigations and feedback
- Critiques, occurrence reports, lessons learned will be distributed often
- More engineers and specialists will be involved in critiques
- Supervisors will be mentored on use of Accident/Injury forms

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- **Workplace Audits/Inspections:** We must audit the workplace to assess physical conditions, for the effectiveness of safety systems and for the awareness of the people who work there.
    - CAS Watch must sign off on all new systems
    - Cryogenics Group will bring in experts to help train on equipment
    - C-AD will increase worker involvement on Tier 1 Teams
    - Location descriptions will be improved on Tier 1 action items
    - Supervisors must conduct regular inspections/cleanups
    - C-AD will improve Tier 1 non-compliance notifications and close outs
    - Ownership and cleanup policy for the tunnels will be made clear

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- **Modified Duty and Return-to-Work Systems:** There must be a thorough effort to find modified duties for injured people who cannot perform their regular jobs but who can safely do other work. There must be comprehensive initiatives to assist in rehabilitation and ensure early return to work.
    - We will re-communicate the C-AD Return-to-Work policy

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■ **Off-the-Job Safety:** C-AD should promote “off-the-job” safety as well as safety in the workplace to help make safety “a way of life.”

- We will begin CPR training for electrical workers at risk
- We will periodically cover off-the-job safety and health issues in training:
  - Back safety
  - Driving safety
  - Muscle strains and sprains
  - Everyday stress

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- **Recognition for Safety Performance:** There should be regular recognition for safety achievement and celebration of safety milestones in order to provide strong reinforcement for C-AD's commitment to excellence.
    - Supervisors must use the Spotlight Award for safety excellence
      - Congratulations: Rob Edwards, Mike Hamilton, Stan Yakaboski – Water Group
      - Congratulations: Jim Meier, George Murdock, Frank Scheifele – CAS Watch
    - Additional incentive programs will be established

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■ **Safety of Facilities and Equipment:** The containment of hazards must be done by integrating leading edge safety technology into the design and operation of facilities.

- We encourage more ergonomic reviews and we will link them to JTAs
- OSHA/Tier 1 backlog is being worked on
- Electrical loads can be determined by using computer-based LOTO
- C-AD will implement an equipment maintenance/testing tracking system
- The indoor-air quality in office environments will be improved
- The file room will be re-designed for safer access
- Equipment/office/storage space upgrades are expected via GPP and AIP
  - New construction projects will replace ancient equipment and thus have the latest safety technology implemented, such as EBIS, Linac upgrade (Neutrino), AGS (RSVP), AGS SEB experimental areas (RSVP)

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## ■ **Measuring and Benchmarking Safety Performance:**

Comprehensive, up-to-date safety statistics must be communicated to all.

- C-AD will encourage BNL to circulate lab-wide monthly safety stats
- C-AD will work at creating succinct, accurate, representative stats
- Safety communication will include full descriptions of serious events
- C-AD will distribute OSHA compliance closeout progress
- C-AD will have more self-evaluation forums in the future



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■ **Hiring for Safety Attitude.** We should have policies or programs to hire people with good safety values and attitudes.

- As a practical matter, safety begins with the hiring process. An applicant's poor attitude about safety can be a danger signal for problems down the road. Learn about an applicant's attitude toward safety by asking for training certificates, checking driving records, and talking candidly about safety during the interview.

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- **Safety of Sub-Contractors, Users and Guests:** Sub-contractors and guests at C-AD must all work to the same safety standards as the Department staff.
    - We acknowledge some C-AD policies are more restrictive than SBMS
    - C-AD will institute new training for the non-C-AD, non-User population
    - C-AD will hold safety self-evaluation meetings with users
    - C-AD will improve communications with the BNL Users Center

## ■ Involvement in Community and Stakeholder Safety: C-AD should be involved and lead in community and stakeholder safety.

- C-AD will pursue concept of using suppliers with excellent safety records
- C-AD will continue to mentor other Departments in OHSAS 18001
  - Congratulations C-AD staff on successful registration



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■ **The Safety Organization:** The C-AD safety organization must be headed by the Department Chair and led by the line, with broad participation by the entire workforce, particularly those at the working level.

- The line must police itself
- If you see an unsafe condition, then correct it or report it
- The line must decide rigging support in favor of safety
- The line must participate more in doing things in safety

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■ **Safety Specialists:** Safety specialists must provide a valuable assist to the C-AD safety organization. They must facilitate involvement of the workforce rather than take responsibility for managing safety or accountability for results, which lie with the line organization.

- ESHQ specialists facilitate and are not the 'safety police'
- ESHQ Division will facilitate snow removal training
- ESHQ will develop a web based form for staff to input safety issues

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## ■ Other Safety Issues:

- C-AD will re-examine cable pulling policy and procedure
- C-AD will pass the deer traffic-hazard concern to ALD
- C-AD will pass the weather emergency issue to ALD
- C-AD will improve its on-call and consecutive work-hours policy
- C-AD will institute taxi policy from work to home and vice versa
- C-AD will post local phone and extinguisher maps
- Snow removal issues will be passed to PE and addressed in C-AD
- Issues with non-compliant stock will be passed to the ALD
- C-AD will improve scheduling of maintenance days
- C-AD will review its trash collection and janitorial assignment policies
- C-AD will review copy room / kitchen room issues in Building 911
- Tree stump and window issues in and around Building 911 will be addressed

# The Final Messages

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- We have very high expectations for performance
- We will continue to reduce Group workloads with new hires, as funding becomes available
- Getting the job done safely is part of the job
- Everyone has a part to play
- We are responsible for each other
- Life is too short to take unnecessary risks
- Rules are not discretionary
- Ask for help if you need it
- If its not safe, don't do it

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EVERYONE HAS STOP WORK AUTHORITY

THINK SAFETY, ACT WISELY



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# Some Final Words From Tom Kirk